ABSTRACT

AIM: The purpose of this study was to evaluate the effects of micro osteoperforation on the rate of tooth movement and root resorption.

MATERIALS AND METHODS: 10 adult patients who met the inclusion criteria were selected. All patients received micro osteoperforation (MOPs) at two time intervals. First intervention just before retraction and second intervention after two months. The mean rate of tooth movement was assessed at monthly intervals from study cast. Root resorption (RR) was evaluated 3-dimensionally using pre and post retraction CBCT data.

RESULTS: The mean rate of tooth movement between first and second intervention shows statistically significant value (P= 0.05). After the first intervention the tooth moved at the rate of 0.8425±0.04mm per month and after second intervention tooth movement increased to a rate of 0.9830± 0.02mm per month. Maxillary lateral incisor showed greater root resorption than maxillary centrals and canines.

CONCLUSION: MOPs seem to increase the rate of tooth movement. However repeated interventions are required.

Key Words: Micro-osteoperforations, En-masse Retraction, Temporary anchorage device (TAD) Rate of tooth movement, Acceleration, Root resorption.